

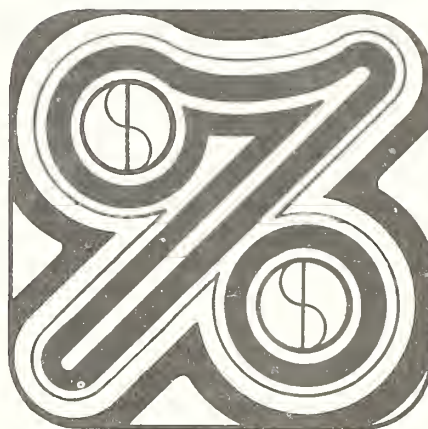
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AGRICULTURAL FINANCE Outlook



The authors of this report appreciate the assistance from many specialists in farm finance and agricultural lending. These include officials of the district Farm Credit banks, agricultural economists of the Federal Reserve System, State directors and other employees of the Farmers Home Administration, ERS economist stationed in a number of the States, and employees of several life insurance companies and commercial bank organizations.

Their help will be utilized more fully in the next Agricultural Finance Outlook, planned for publication in March, when regional as well as national conditions will be reviewed.

AGRICULTURAL FINANCE OUTLOOK

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SUMMARY

Farm operators and landowners are in very good financial positions at the end of 1973. A slightly less favorable situation is expected in 1974.

Interest costs are projected to remain high as compared to early 1973 and prices of purchased inputs will increase. However, realized net farm income is estimated at \$20 to \$23 billion, the second highest on record although down from over \$25 billion in 1973. Farm output is expected to increase again in 1974 but gross farm income will decline and costs rise.

Use of short- and intermediate-term loan funds to purchase farming inputs is expected to increase as the quantity and prices of inputs, particularly fertilizer and fuel, continue rising throughout 1974. However, farmers' demands for such funds will be moderated by the carryover of large cash balances, time deposits, and unsold inventories of crops and livestock. Use of farm mortgage loan funds is expected to increase as land prices rise further and as farm operators and landlords attempt to enlarge their operations and make additional capital improvements.

Although farm real estate prices per acre will continue rising, the rate of increase will be below the 20 percent anticipated for 1973. The increase in 1973 is the sharpest on record.

Lower net farm income for next year would suggest that more of the additions to capital will be financed out of loan funds than in 1973 and that internal sources of financing will account for slightly less than 60 percent of the increase in capital as compared with 70 percent in 1973.

The balance sheet for January 1, 1975, (table 5, page 12) shows total assets reaching as high as \$498 billion, 10 percent above January 1, 1974, if interest rate trends moderate in 1974. Total loans outstanding on January 1, 1975, are estimated at \$90-\$92 billion, depending on interest rates charged on new loans in 1974. Thus farmer and landlord equities are expected to increase about 9 percent. Debt as a percent of equity projected for January 1, 1975, is 23 percent, up from 21 percent a year earlier, but below the 24 percent for January 1, 1973.

In 1973, farm output increased, commodity prices rose rapidly and farmers' net incomes reached a new

high of over \$25 billion—up more than one fourth from 1972. Although interest rates rose during the first three quarters of 1973 as a result of strong demands and a restrictive monetary policy, farmers

and landlords increased their total loan funds outstanding by \$6.3 billion. Internal funds, however, still financed more than two-thirds of capital formation in 1973.

REVIEW OF 1973

Short-term interest rates on new issues of government securities in the national money markets nearly doubled in the first 8 months of 1973. Rates on 3-month Treasury bills rose from nearly 5 percent at the beginning of the year to nearly 9 percent in August. (table 1). They then declined but subsequently rose to fluctuate between 7 and 8 percent in November. Long-term rates on new issues also rose during the year. Rates on long-term Government bonds reached nearly 7 percent in August, almost 1 percentage point higher than at the start of the year. (table 1). These rates eased somewhat after August and in September averaged 6.4 percent. Through November, long-term rates have continued to average near this level.

Table 1—Average monthly interest rate on new issues of government securities, selected months, 1972 and 1973

Item	1972		1973		
	Aug.	Sept.	Jan.	Aug.	Sept.
	Pct.	Pct.	Pct.	Pct.	Pct.
Government securities ^a					
Short term (3 month					
bills)	4.0	4.7	5.3	8.7	8.5
Long term bonds	5.5	5.7	5.9	6.8	6.4

^aFederal Reserve Bulletin.

Increases in domestic incomes and production, and large capital investments by businesses in part led to greater credit demands and to higher interest rates. Funds for financing residential housing became much tighter and rates rose during the year. In recent weeks, interest rates, both short- and long-term, have been fluctuating more than normal, probably reflecting the economic uncertainties related to the energy situation. The availability and cost of fuels, particularly as they affect attitudes about business investments and spending by consumers, will be an important influence in credit markets in 1974.

Rising interest rates in the central money markets were soon reflected in rates charged by farm lenders such as the Production Credit Associations and the Federal land banks who obtain their funds through the sale of securities in the money markets. In contrast, rates charged by lender groups further removed from the influence of the urban centers change less quickly. These include many of the smaller commercial banks, and probably some individuals such as sellers of farmland under contract. By the third quarter of the year, however, all

of the lenders for whom data are available had increased the rates charged on their farm loans by nearly ½ percentage point on farm mortgage loans and nearly 2 percentage points on short- and intermediate-term loans.

With interest rates increasing during 1973 and with farmers using larger amounts of borrowed funds, the interest charges on farm debt are substantially greater. Farm interest payments for 1973 are estimated at \$4.8 billion, 13 percent more than in 1972.

Prices received by farmers in 1973 increased much more rapidly than prices paid. The index of prices received by farmers for all farm products increased an estimated 36 percent over the 126 (1967=100) for 1972. The index of prices paid increased 14 percent. The index of prices received for crops advanced more rapidly than livestock prices, 40 percent and 33 percent, respectively.

Total 1973 farm output was up about 4 percent over 1972, with all of the increase due to larger crop production. Livestock production (including inventory changes) was down slightly. World demand for agricultural products increased dramatically with the total value of U.S. agricultural exports for fiscal 1973 up 50 percent over the \$8 billion for fiscal 1972. The forecast for fiscal 1974 is \$19 billion.

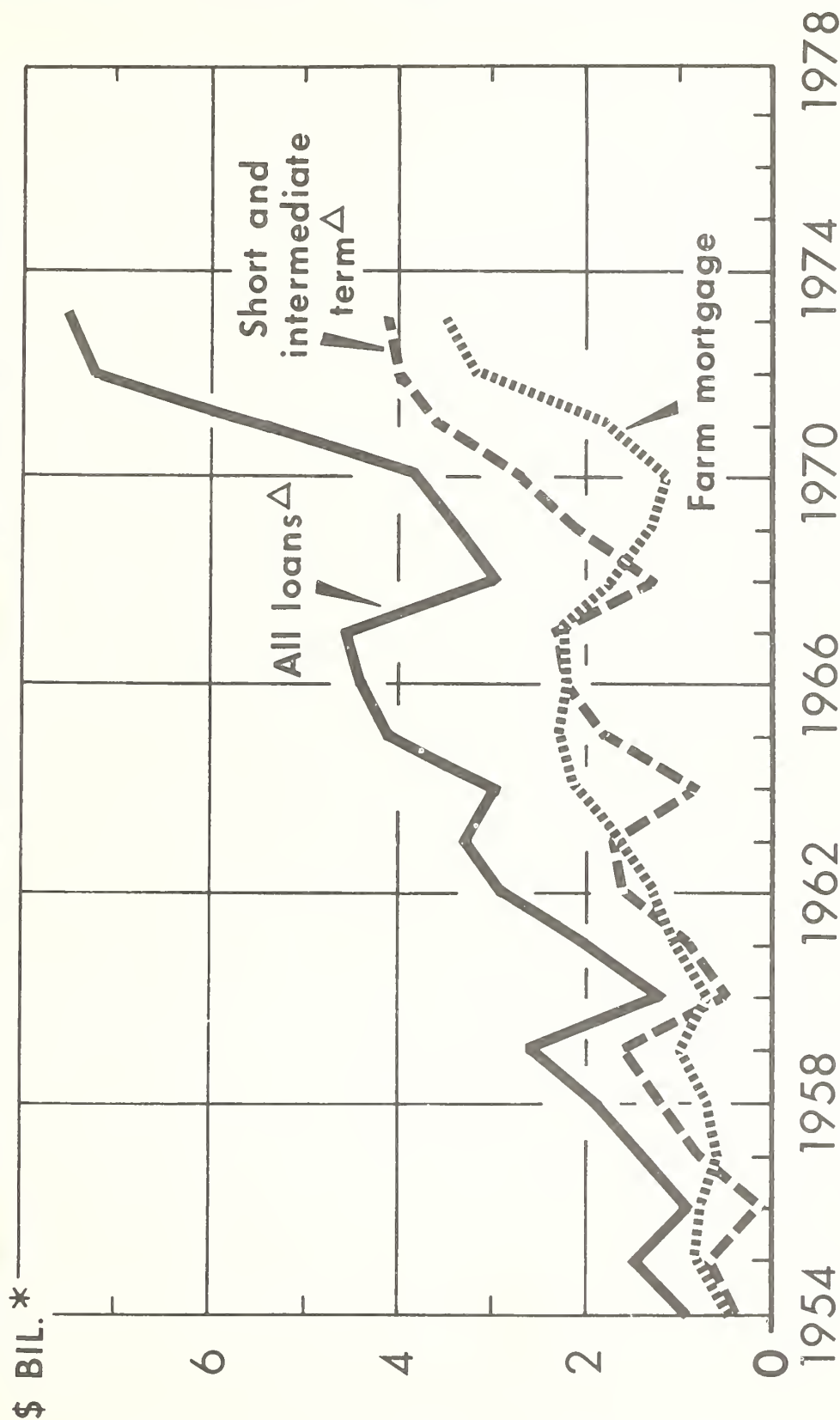
Realized gross farm income for 1973 is expected to be up 30 percent over 1972. Farm production expenses also are up 30 percent, with net farm income increasing to an estimated record of over \$25 billion. In 1972 it was \$20 billion. Off-farm income for 1973 is up an estimated 5 percent from the \$19.4 billion in 1972.

Short- and Intermediate-Term Financing in 1973

Demand for short- and intermediate-term farm loans has been strong in 1973. New loans less repayments in 1973 will be near \$4.1 billion (fig. 1)—the same increase as experienced in 1972. Total non-mortgage debts by all lenders excluding CCC loans will reach \$41.4 billion by January 1, 1974—11 percent higher than the previous year (fig. 2).

The strong demand for borrowed funds in 1973 reflects producers' needs to finance higher priced feed and livestock inventories plus generally higher production costs and additional land brought into

ANNUAL NET FLOW OF FARM LOAN FUNDS*



* NEW LOANS MADE LESS REPAYMENTS DURING YEAR, 48 STATES.

Δ EXCLUDES CCC LOANS WHICH DECLINED \$0.5 BILLION IN '72 AND \$1.3 BILLION IN '73.
1973 PRELIMINARY.

U.S. DEPARTMENT OF AGRICULTURE

NEG. ERS 3792-73 (12)

ECONOMIC RESEARCH SERVICE

Figure 1

production. Crop acreage is about 10 percent greater than in 1972. Prices paid for production items in the first half of 1973 averaged 17 percent higher than the previous year. Demand for funds has also been stimulated by increases in farm equipment purchases. The need to replace worn-out or obsolete items plus higher net income in 1973 has encouraged farmers to reduce their income taxes through investment credit and higher depreciation deductions. Holdover of crops for sale in the next tax year and possible gains from price increases will contribute to a high level of debt carryover from 1973 to 1974.

Regional increases in short- and intermediate-term debt levels attest to the strong demand for loan funds throughout the United States. Regional increases in the level of this debt at commercial banks and the PCA's at midyear varied from 19.7 percent in the Southern Plains to 8.1 percent in the Lake States (fig. 3).

Although demand for short- and intermediate-term funds continued strong in 1973, farm operators in general experienced little difficulty in obtaining funds. Interest rates on these loans rose sharply from January to September but funds were generally available at these higher costs. Commercial banks in most rural areas had sufficient reserves to meet the borrowing needs of most of their borrowers. Also, Production Credit Associations had no difficulty obtaining funds via the Federal Intermediate Credit banks and their access to the central money markets.

An exception to the general situation of adequate funds in 1973 was experienced by large commercial feedlot operators and in some cases by other large operators whose loan requests exceeded the smaller banks' loan limits. By August 1973 prices of 600 to 700 pound feeder cattle at Kansas City had reached an average of \$62.00 per hundred weight. Feed grain prices were also at record levels. There was increased use of correspondent relations or other arrangements for outside sources of funds to handle overline requirements. A doubling of loan requirements to handle the same volume of cattle was not uncommon. Loan-to-deposit ratios at the larger banks were particularly tight during July and August, and some banks in feedlot areas asked borrowers to stay within established lines of credit.

Commercial banks continue to supply a substantial part of the short- and intermediate-term funds to agriculture. At midyear, the amount of debt outstanding for banks was \$16 billion—nearly 18 percent greater than a year earlier (table 2). The proportion of funds supplied by banks was near 65 percent of the three institutional lenders shown—a slight increase in the share of debt relative to other institutional lenders. There are some indications that commercial banks are now handling a larger share of the financing handled previously by merchants and dealers. General shortages of farm supplies and

Table 2—Short and intermediate term farm debt held by major institutional lenders^a

Lender	Debt outstanding June 30			Percent change ^b	
	1971	1972	1973	1971-72	1972-73
	Billion dollars	Billion dollars	Billion dollars	Percent	Percent
Commercial banks	12.2	13.6	16.0	11.3	17.5
Production Credit Associations ^c	6.5	7.1	7.8	9.0	10.1
Farmers Home Administration	.9	.9	1.1	.5	21.7
Total	19.6	21.6	24.9	10.1	15.2

^aExcludes merchant and dealer loans, loans of individuals and loans of some other groups who provide approximately 40 percent of the total short and intermediate term debt.

^bComputed from unrounded data. ^cIncludes Federal Intermediate Credit Bank loans to other lending institutions.

equipment relative to demand have reduced the competitive need to supply customer financing. Buyers requiring loan funds have commonly had to go to other sources.

Production Credit Associations, the second largest source of production funds from institutional lenders, had outstanding debt of \$7.5 billion at midyear, nearly 10 percent greater than a year earlier. PCA financing amounted to about 30 percent of that supplied by the three institutional lenders, down slightly from the previous year.

The Farmers Home Administration had debt outstanding at midyear of \$1.1 billion, almost 22 percent above year-earlier levels. The higher level of debt by FHA was primarily due to emergency loans to flood victims in the Northeast and Southern Plains.

Farm Real Estate and Farm Mortgage Lending in 1973

Farm operators moved into 1973 with 2 years of favorable income and expectations of a very good year in 1973. Farm commodity prices rose sharply through the third quarter and then receded somewhat, but net farm incomes for the year are up about 25 percent.

Farm real estate prices were rising rapidly in late 1972 and early 1973 and continued to increase sharply into November 1973, setting a record for land price increases in any 1-year period. Preliminary data suggest that the November 1972 to November 1973 increase in per acre prices averaged 20 percent nationally. The rapid rise in land values in 1973 seemed to be fueled by farmer optimism over income and farm commodity prices and by the ready availability but higher cost loan funds supplied to the sector.

FARM LOAN FUNDS OUTSTANDING JANUARY 1

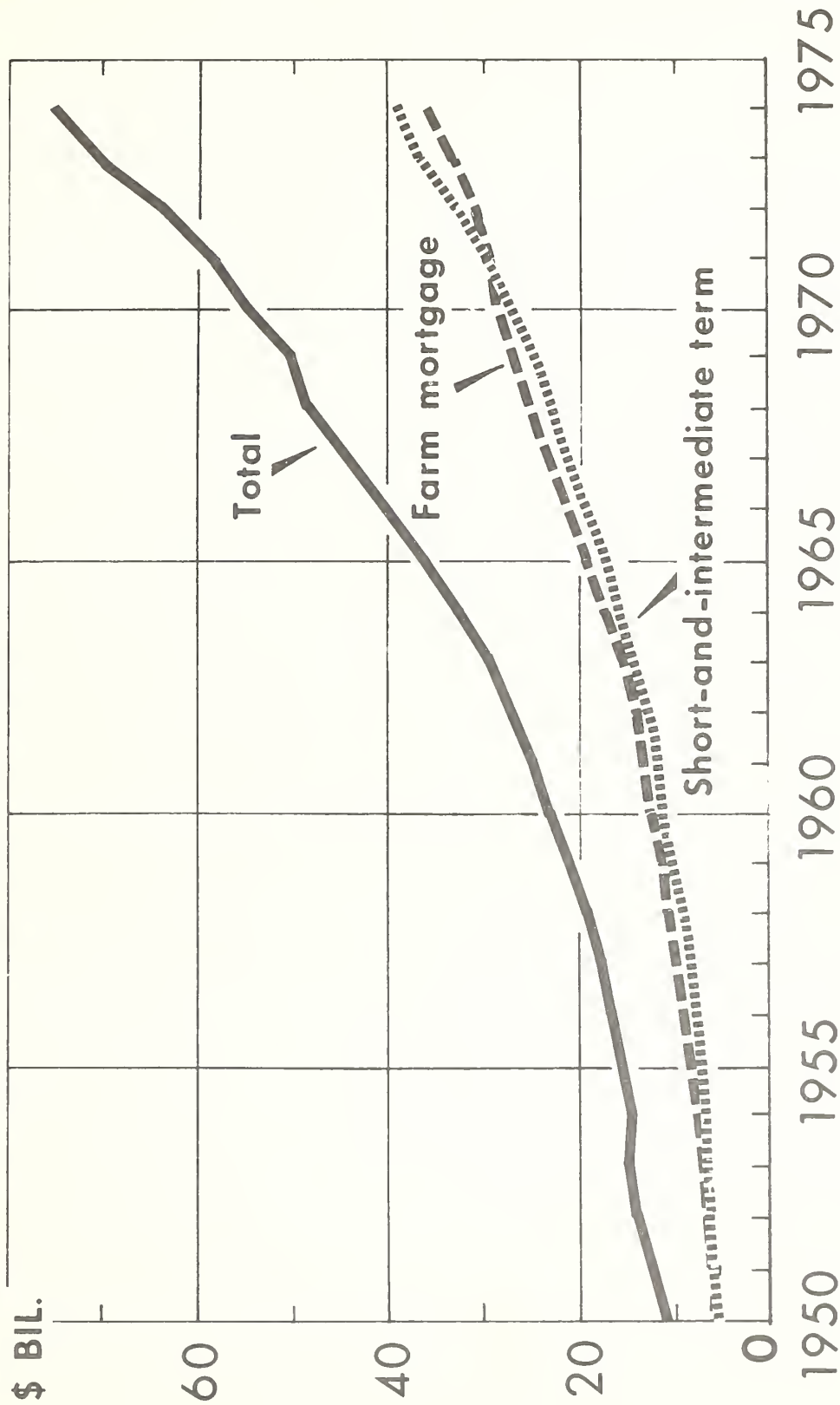


Figure 2

48 STATES. EXCLUDES CCC LOANS. 1974 PRELIMINARY DATA AS OF JAN 1

With good incomes and rising land prices, farm operators continued to buy land for enlargement purposes and invest heavily in capital improvements. In addition, some substitution of long-term for shorter-term financing may have occurred in 1973 because interest rates on long-term loans rose less and were below short-term rates in the summer and fall. Thus the volume of mortgage funds borrowed increased sharply in 1973 (fig. 1). In the first half of 1973 borrowing from Federal land banks was up 69 percent from a year earlier, insurance companies up 40 percent, and the Farmers Home Administration up 38 percent. Estimates for loans of individuals and other lenders are not available for the first half of 1973, but their lending is also believed to have increased.

Moving into the third quarter of 1973, long-term interest rates for farm loans began a more rapid increase as tighter monetary restraints were applied. This increased the cost of funds, particularly to the Federal land banks. In addition, insurance companies experienced a sharp increase in policy loans as policyholders took advantage of low-cost funds to purchase higher yielding debt obligations and certificates of deposit. By September 1973, several major insurance companies were indicating that most available funds had been committed, and few additional commitments would be made for the remainder of the year.

Land markets and mortgage lending in 1973 have been strongly influenced by changes in lending policies of the Federal land banks and by the Farmers Home Administration. Changes in legislation affecting each have increased the supply of funds available to borrowers and seem to have made current interest rates less of a restraint on long-term borrowing.

First, the shift in FLB loan limits from 65 percent of normal agricultural value to a maximum of 85 percent of market value has resulted in a substantial reduction in equity requirements and has increased both the number of potential buyers and the quantity of mortgage funds available to a borrower. Second, FHA has been granted the authority to take a second position on long-term loans which can result in up to 100 percent financing. FHA has also increased the debt limit from all sources from \$100,000 to \$225,000 of which FHA may loan or guarantee up to \$100,000. The combined effect of these changes is expected to substantially increase the number of potential buyers and the quantity of funds used for real estate purchases. Third, the variable interest rate used by the Federal land banks appears to have made the demand for long-term funds from this source less affected by the current market rate on those funds. Thus, there is less incentive to defer long-term investments in periods of tight credit if the rate rise is felt to be temporary, since the rate on debt having the

variable interest rate and the rate on new loans will tend to move together.

The net impact of these changes in FLB and FHA lending policies on the demand for and supply of total loanable funds has not yet been determined. These changes would seem to result in sharply increased demand for FLB and FHA funds by the farm sector, and restrictive monetary policies will be much less of a factor in the demand for farm real estate.

The new regulations appear to have substantially changed the competitive positions of FLB's and other mortgage lenders to the advantage of the FLB's. If monetary policy is developed so that interest rates stabilize, the variable rate mortgage is of little importance. However, if cyclical changes in the availability of funds and market rates continue, borrowers would be well advised to secure their funds from the FLB's in periods of tight credit and from other lenders at the bottom of the cycle—assuming these other lenders continue with a fixed rate mortgage.

Financing Capital Formation in 1973

Total Annual Capital Formation

Annual capital formation in the farm sector is comprised of investment in real estate improvements and nonreal estate assets plus other uses of funds to increase cash working balances and to purchase real estate assets from farmers leaving the farm sector. Total annual capital formation in 1973 is estimated to be \$25.8 billion, up around one-fourth from 1972 (table 3). Capital improvements to real estate assets, for example, are expected to be approximately \$1.8 billion in 1973, up about 16 percent from 1972. Funds used to purchase real estate assets from farmers leaving the sector are estimated at \$11.2 billion or 32 percent higher than in 1972.

Investment in machinery, motor vehicles, and household furnishings is expected to be \$11.1 billion in 1973, an increase of 18 percent over 1972. Finally, uses of funds to increase cash-on-hand and physical changes in farm inventories valued at average annual prices in 1973 are expected to be \$.6 billion and \$1.1 billion, respectively. These uses represent increases of 87 percent and 66 percent, respectively.

Much of the increase in annual capital formation in 1973 is in response to the unusually high level of net farm income and returns on investment in the farm sector. In addition, interest rates on new loans did not begin to rise substantially until the second half of 1973, and loan funds in general were available for those who were willing to pay the going interest rate.

Sources of Financing

Funds used to finance annual capital formation in 1973 amounted to \$25.8 billion. Of this amount, \$18.2

INCREASE IN SHORT AND INTERMEDIATE TERM FARM DEBT

Held by Insured Commercial Banks and
Production Credit Associations, 1972-73*

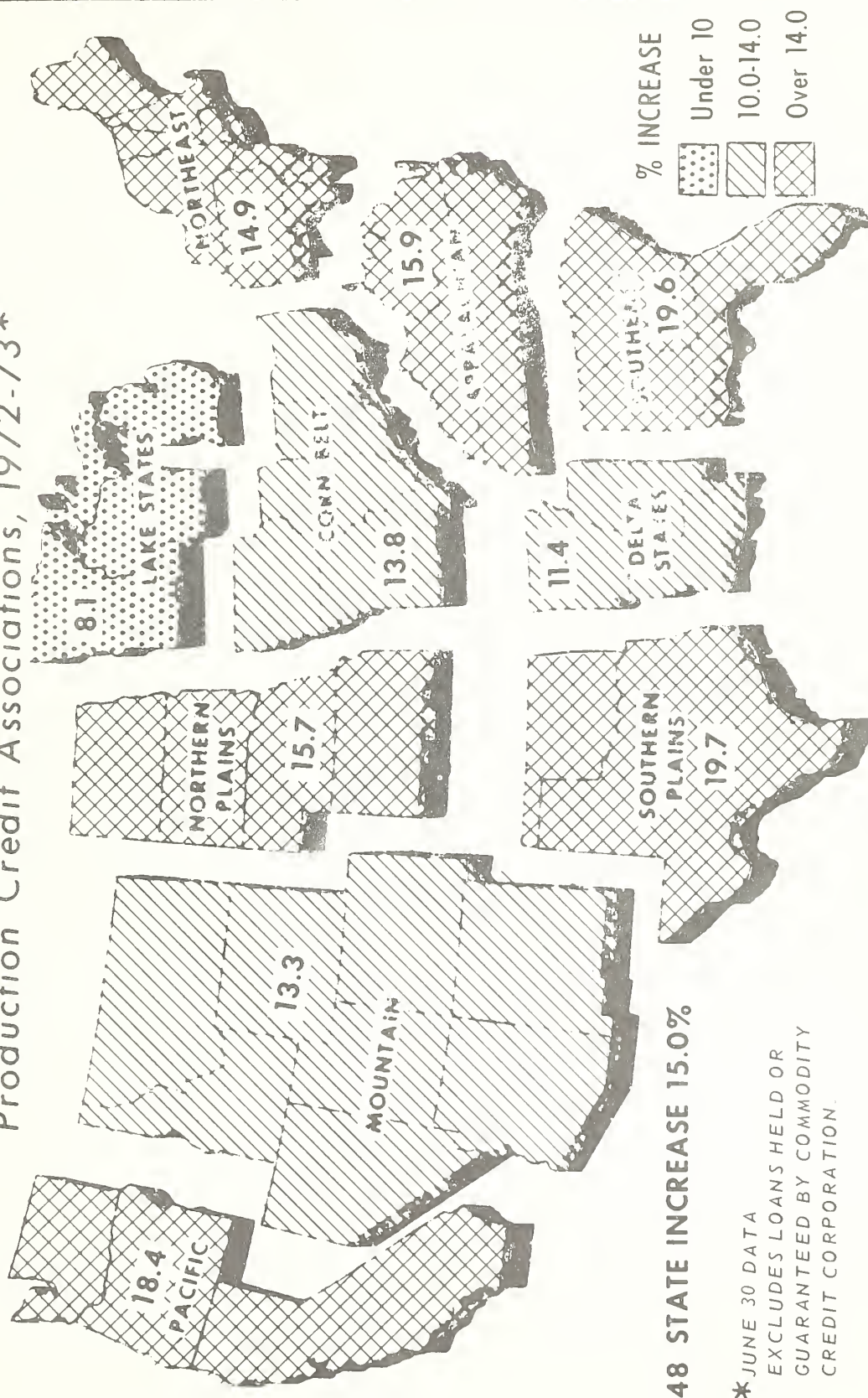


Figure 3

Table 3—Financing capital formation in the farm sector, 1960-73

Item	1960	1965	1970	1971	1972	1973 ^a
	<i>Billion dollars</i>	<i>Billion dollars</i>	<i>Billion dollars</i>	<i>Billion dollars</i>	<i>Billion dollars</i>	<i>Billion dollars</i>
<i>Annual capital formation:</i>						
Investment in real estate assets:						
Capital improvements to real estate assets	1.3	1.2	1.3	1.4	1.5	1.8
Uses of funds to purchase real estate assets from discontinuing proprietors	3.0	4.3	3.8	5.5	8.5	11.2
Investment in machinery, motor vehicles and household furnishings	2.1	4.8	7.2	7.9	9.4	11.1
Uses of funds to increase farm inventories	.3	1.0	.1	1.7	.7	1.1
Uses of funds to increase cash balances	-.4	.1	.1	.1	.3	.6
Total annual capital formation	6.3	11.4	12.5	16.6	20.4	25.8
<i>Sources of funds used to finance capital formation:</i>						
Cash flow of income	5.2	7.3	8.7	11.2	13.1	18.2
New loans less repayments:						
Farm mortgage loan funds	.7	2.3	1.1	1.8	3.2	3.5
Short-and intermediate-term loan funds ^b	.4	1.8	2.7	3.6	4.1	4.1
Total cash sources of funds used	6.3	11.4	12.5	16.6	20.4	25.8
<i>Percentage of capital formation financed by:</i>						
Cash flow of income	82.6	64.0	69.6	67.5	64.2	70.5
New loans less repayments:						
Farm mortgage loan funds	11.1	20.2	8.8	10.8	15.7	13.6
Short-and intermediate-term loan funds ^b	6.3	15.8	21.6	21.7	20.1	15.9
Total cash sources of funds used	100.0	100.0	100.0	100.0	100.0	100.0

^aPreliminary. Represent unofficial estimates of flows of funds during 1973. ^bExcludes CCC nonrecourse loans.

billion or approximately 70 percent came from cash income during the year. This percentage of annual capital formation financed by internal sources of funds is up substantially from the 64 percent in 1972. Higher income levels and higher interest rates on new loans in 1973 prompted farmers to use a greater amount of internal funds. The remainder of annual capital formation in 1973 was financed by farm borrowings. The volume of new farm mortgage loan funds less repayments of \$3.5 billion expected for 1973 will finance about 14 percent of annual capital formation during the year. Similarly, the expected net flow of new short-and intermediate-term loan funds less repayments in 1973 of \$4.1 billion will finance 16 percent of annual capital formation during the year. The net flow of short-and intermediate-term loan funds in 1973 is about the same as last year. This is partially a result of the relatively higher interest rates on these shorter-term loan funds as compared to farm mortgage loan funds and higher cash farm income in 1973. Cash income represents a closer substitute source of financing for short-and intermediate-term loan funds than for farm mortgage loan funds.

Financial Position of the Farm Sector

Portfolio Distribution

The value of physical and financial assets and loan

funds outstanding in the farm sector increased substantially from 1972 to 1973 while their relative distribution in portfolios in the farm sector changed little. As shown in table 4 the value of real estate assets in the farm sector is anticipated to be \$310.4 billion, up some 20 percent from 1972. Similarly, the value of nonreal estate assets is estimated at \$115.3 billion on January 1, 1974, up 16 percent. Physical assets, therefore, were estimated at \$425.7 billion, \$68.6 billion or 19 percent above the total on January 1, 1973.

Currency and commercial bank deposits held in the farm sector on January 1, 1974, are expected to be \$15.2 billion, an increase of \$1.2 billion or 8.6 percent from a year earlier. Total financial assets, after U.S. savings bonds and investments in farmer cooperatives are added in, will reach \$28.6 billion, up 7.8 percent from a year earlier.

Total debt claims on investments in the farm sector are estimated at \$80.0 billion on January 1, 1974—up \$6.3 billion or 8.6 percent. Farm mortgage loan funds outstanding are expected to be \$38.0 billion. Short-and intermediate-term loan funds outstanding, including Commodity Credit Corporation nonrecourse loans are expected to be \$42 billion.

Equity claims on these assets will reach \$374.4 billion on January 1, 1974, up almost 21 percent from January 1, 1973. The ratio of these debt claims to equity claims on total assets is estimated at 21.3 percent by January 1, 1974, down 2.5 percentage points from one year ago. The ratio of debt claims to

Table 4—Balance Sheet for the Farm Sector for Selected Years, January 1, 1961-74

Item	1961	1966	1971	1972	1973	1974 ^a
	<i>Billion dollars</i>	<i>Billion dollars</i>	<i>Billion dollars</i>	<i>Billion dollars</i>	<i>Billion dollars</i>	<i>Billion dollars</i>
<i>Physical assets:</i>						
Real estate assets	131.8	172.2	214.1	230.5	258.7	310.4
Non-real estate assets	54.6	61.6	78.5	85.7	98.4	115.3
Total physical assets	186.4	233.8	292.6	316.2	357.1	425.7
<i>Financial assets:</i>						
Demand deposits and currency	5.9	6.0	6.5	6.6	6.9	7.3
Time and savings deposits	2.8	4.0	5.9	6.5	7.1	7.9
Other financial assets ^b	9.1	9.9	11.2	11.8	12.3	13.4
Total financial assets	17.8	19.9	23.6	24.9	26.3	28.6
<i>Debt claims:</i>						
Farm mortgage loan funds	12.8	21.2	29.5	31.3	34.5	38.0
Short- and intermediate-term loan funds ^c	13.4	20.4	31.6	35.6	39.1	41.9
Total debt claims	26.2	41.6	61.1	66.9	73.6	79.9
Equity claims on assets	178.0	212.1	255.1	274.2	309.8	374.4

^aPreliminary. ^bU.S. savings bonds and investments in farmer cooperatives. Does not include financial claims on specific

nonfarm assets such as holdings of common stocks. ^cIncludes CCC Nonrecourse loans.

total assets is expected to be 17.6 percent on January 1, 1974, as compared to 19.2 percent on January 1, 1973. Thus, the relative financial position of farmers has improved from that of January 1, 1973.

Servicing Debt Commitments

The ability of farmers to service their outstanding debt commitments out of net farm earnings after making annual interest payments can be measured by examining the ratio of net income from farm sources to total loan funds outstanding. This ratio is expected to be 32.0 percent by the end of 1973, a gain of 4 percentage points from the ratio reported at the end of 1972. Thus, farmers were in a substantially better position in 1973 to service their debt commitments out of farm earnings due to the relatively higher levels of income.

OUTLOOK FOR 1974

Key Economic Variables

Farm output, prices paid and received by farmers, and interest rates charged on new farm loans are expected to be the major factors influencing financial developments in the farm sector in 1974. Farm output is expected to grow over 1973 levels as farmers expand planted acreage. This assumes that fuel requirements for production will be made available. Livestock production is expected to expand moderately. Consequently, the physical quantities of inputs used in production as well as the quantities of

farm output commercially marketed will be higher than 1973 levels.

Production expenses in 1974 are expected to rise due, in part, to the greater quantity of purchased inputs. Substantial increases in prices paid for fertilizer, fuel, and farm machinery are also expected to increase production expenses. The extent of increase in values of farm real estate assets are likely to be strongly influenced by farm income levels and the interest rates on new farm mortgage loans. Nonfarm demand for rural home and recreation sites will be reduced if gasoline remains in short supply.

General expectations are that prices received for livestock in 1974 will show little change from the record levels of 1973 while crop prices will likely average higher. However, prices paid for production inputs will likely average substantially higher during the year. Net farm income in 1974 is expected to be \$20-\$23 billion, a decline from the record income of over \$25 billion expected for 1973.

Monetary policies of the Federal Reserve Board will in part determine the level of interest rates in the farm and nonfarm sectors of the economy. If the Federal Reserve Board follows a tight money policy, steady or rising interest rates on farm mortgage and short- and intermediate-term loans are expected. However, there will be an effort to avoid an overly tight monetary policy which could lead to reduced economic activity and higher unemployment. Interest rates in 1974 are sufficiently uncertain at this point that one should consider at least two alternative "scenarios" which would permit an illustration of their influence on financial developments in the farm sector in 1974.

Under a high interest rate scenario, rates on farm mortgage and short- and intermediate-term loans made in 1974 are assumed to average 8½ percent and 9 percent, respectively. Alternatively, a less restrictive monetary policy could result in moderately lower increases in interest rates. Here, interest rates on farm mortgage and short- and intermediate-term loans made in 1974 are assumed to average 8 percent and 8½ percent, respectively. Tables 5 and 6 present forecasts of the financial structure and financing of capital formation in 1974 under both the high and the moderating interest rate scenarios.¹ While two interest rate structures are examined, it is the high interest rate scenario which seems most likely at this time.

Capital Formation and Stocks of Assets and Loan Funds

Total capital formation in the farm sector in 1974 is forecasted at \$25.6 billion, about 1 percent below 1973, if interest rates approximate those assumed in the high interest rate scenario. It will, however, remain well above the 1972 level. If, instead, interest rates approximate those assumed in the moderating

interest rate scenario, total capital formation is forecasted to reach \$27.2 billion or 6 percent greater than the level forecasted in the high interest rate scenario and 5 percent greater than 1973. Investment in new capital items in 1974 is forecasted to be \$13.1 billion under the high interest rate scenario and \$14.1 billion under the moderating interest rate scenario, or between 12-17 percent below 1973, reflecting the decline in net farm income expected for 1974. Uses of funds to purchase existing real estate assets from farmers leaving the farm sector in 1974 will likely increase between 11-17 percent from 1973. This rise is due to the expected continuing rise in the value of real estate assets being transferred. The number of voluntary real estate transfers, however, is expected to decline slightly from 1973.

The value of real estate assets at the end of 1974 is forecasted to be \$339.2 billion under the high interest rate scenario as a result of relatively lower returns on farm investments. If interest rates were to instead follow those forecasted under the moderating interest rate scenario, real estate assets may be valued at \$344.1 billion. Nonreal estate assets would be \$122.7 billion with high and \$123.1 billion with moderating interest rates. Financial assets held by farmers would be about \$31.1 billion under either scenario.

The volume of loan funds outstanding in the farm sector may reach \$90.4 billion by January 1, 1975, if interest rates approximate the high interest rate

Table 5—Balance Sheet for the Farm Sector, January 1, 1973 and 1974 and Forecasted for January 1, 1975 Under Alternative Interest Rate Scenarios

Item	January 1, 1973	January 1, 1974	January 1, 1975	
			High Interest Rates*	Moderating Interest Rates**
	<i>Billion dollars</i>	<i>Billion dollars</i>	<i>Billion dollars</i>	<i>Billion dollars</i>
<i>Physical assets:</i>				
Real estate assets	258.7	310.4	339.2	344.1
Non-real estate assets	98.4	115.3	122.7	123.1
Total physical assets	357.1	425.7	461.9	467.2
<i>Financial assets:</i>				
Demand deposits and currency	6.9	7.3	8.0	8.3
Time and savings deposits	7.1	7.9	8.6	8.4
Other financial assets ^a	12.3	13.4	14.5	14.1
Total financial assets	26.3	28.6	31.1	30.8
<i>Debt claims:</i>				
Farm mortgage loan funds	34.5	38.0	44.1	44.6
Short-and intermediate term loan funds ^b	39.1	41.9	46.3	47.2
Total debt claims	73.6	79.9	90.4	91.8
Equity claims on assets	309.8	374.4	402.6	406.2

^aU. S. savings bonds and investments in farmer cooperatives. Does not include financial claims on specific nonfarm assets such as holdings of common stocks. ^bIncludes CCC Nonrecourse loans.

*High interest rate scenario: 8½ percent on farm mortgage loans and 9 percent on short-and intermediate-term loans.

**Moderating interest rate scenario: 8 percent on farm mortgage loans and 8½ percent on short-and intermediate-term loans.

**Table 6—Financing Capital Formation in the Farm Sector, 1972-73 and Forecasted for 1974
Under Alternative Interest Rate Scenarios**

Item	1972	1973 ^a	1974	
			High Interest Rates*	Moderating Interest Rates**
	<i>Billion dollars</i>	<i>Billion dollars</i>	<i>Billion dollars</i>	<i>Billion dollars</i>
<i>Annual capital formation:</i>				
Investment in real estate assets:				
Capital improvements to real estate assets	1.5	1.8	1.7	1.7
Uses of funds to purchase real estate assets				
from discontinuing proprietors	8.5	11.2	12.5	13.1
Investment in machinery, motor vehicles and household furnishings	9.4	11.1	10.0	10.5
Uses of funds to increase farm inventories	.7	1.1	.7	.9
Uses of funds to increase cash balances	.3	.6	.7	1.0
Total annual capital formation	20.4	25.8	25.6	27.2
<i>Sources of funds used to finance capital formation:</i>				
Cash flow of income	13.1	18.2	15.1	15.3
New loans less repayments:				
Farm mortgage loan funds	3.2	3.5	6.1	6.6
Short- and intermediate-term loan funds ^b	4.1	4.1	4.4	5.3
Total cash sources of funds used	20.4	25.8	25.6	27.2
<i>Percentage of capital formation financed by:</i>				
Cash flow of income	64.2	70.5	59.0	56.2
New loans less repayments:				
Farm mortgage loan funds	15.7	13.6	23.8	24.3
Short- and intermediate term loan funds ^b	20.1	15.9	17.2	19.5
Total cash sources of funds used	100.0	100.0	100.0	100.0

^aPreliminary. Represent unofficial estimates of flows of funds during 1973. ^bExcludes CCC Nonrecourse loans.

*High interest rate scenario: 8½ percent on farm mortgage loans and 9 percent on short-and intermediate-term loans.

**Moderating interest rate scenario: 8 percent on farm mortgage loans and 8½ percent on short-and intermediate-term loans.

scenario. This represents an increase of 12.5 percent over a year earlier. If, on the other hand, interest rates follow a moderating trend in 1974, the volume of loan funds outstanding may reach \$91.8 billion or 15 percent above January 1, 1974, and 1.6 percent greater than that forecasted under the high interest rate scenario.

The cost of borrowing will be relatively high in 1974. However, the supply of loan funds made available by banks, PCA's, and other lenders will be adequate to meet the demands of producers to carry out planned production.

The impact of the 1972 Rural Development Act administered by FHA will begin to be felt in 1974. Operating procedures for the new program have been finalized and loans are now being made. One new part of this program is a guarantee loan feature. This feature would allow for recovery of up to 90 percent of losses of funds outstanding by recognized agricultural lenders for business and industrial purposes, farm operations, emergencies, and farm real estate purposes in rural areas. The guarantee program will allow lending on accounts previously

rejected due to collateral or risk reasons. Market entry will be eased for some borrowers, but the failure-success ratio will likely exceed that under the current program.

Considering farm mortgage lending, the Federal land banks can be expected to provide funds to meet rising demand by borrowing from central money markets at rates above the average for 1973 but most likely below the high level reached in the third quarter of 1973. Insurance companies will have somewhat less money available in 1974 than in 1973, but their shortage may be made up by individuals and the Federal land banks—close substitutes as sources of funds. The smaller commercial banks are likely to find that more of the loan requests they receive are beyond their lending limits and will more frequently be turning to correspondents to carry their overlines. Federal land banks will likely increase their share of farm mortgage lending in 1974; commercial banks will likely hold their present share; and life insurance company lending will account for about the same absolute volume but a smaller share of the market.

Financing capital formation

If interest rates follow the high interest rate scenario in 1974, farmers will finance 41 percent of annual capital formation out of farm borrowings with the remaining 59 percent being financed out of cash flows of income. If, instead, interest rates in 1974 follow the moderating interest rate scenario, 44 percent of total annual capital formation will be financed by farm borrowings. Thus, in moving from the high to the moderating interest rate scenario in 1974, the decline in interest rates would result in a 7 percent increase in the importance of farm

borrowings as a source of financing capital formation.

Farmers may have some difficulties servicing their debt commitments out of farm earnings in 1974 regardless of which interest rate scenario occurs, due primarily to the projected lower net farm income. The ratio of net income from farm sources to total loan funds outstanding is expected to be approximately 25 percent, 7 percentage points below the ratio of 32 percent in 1973. However, the ratio for 1974 is only slightly below the ratio of 28 percent reported for 1972.

OUTLOOK CONFERENCE SCHEDULED FOR DECEMBER 17-19, 1973

The National Agricultural Outlook Conference has been set for December 17 through 19, 1973, at the U.S. Department of Agriculture in Washington, D.C. This year's Conference is about 2 months earlier than usual to give farmers and farm suppliers more time to plan for 1974 food production.

The 1974 outlook for U.S. agriculture and the general economy will receive particular attention at the Conference. The outlook for farm inputs such as fuel, fertilizer, pesticides, and farm equipment will be stressed. Sessions on the 1974 outlook for major commodities will make up an important part of the Conference as usual. The Conference is sponsored by USDA's Economic Research Service, Extension Service, and Agricultural Research Service.



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AGRICULTURAL FINANCE OUTLOOK, 1974

Comments by Philip T. Allen

Agricultural Outlook Conference

December 19, 1973

The price and income outlook and farm cost prospects for 1974 have been covered fully in other sessions of the Conference. This session will focus upon anticipated borrowing needs in the farm sector in 1974 and the factors that will influence this demand. In preparing our report, we have been assisted by many finance and credit specialists.

Farmers' anticipation of product prices will have a major influence upon their investment decisions. Despite a leveling off of prices received, a further upward movement of prices paid, and continued high interest rates, net farm income in 1974 is expected to be \$20-23 billion, second only to the record net farm income of over \$25 billion expected for 1973. Thus, farmers remain generally optimistic and are expected to be committing large amounts of their earnings and loan funds toward expanding agricultural output.

Forecasting Model

The method used to forecast the level of capital formation in the farm sector and how this investment in capital items will be financed is the Aggregative Income and Wealth (AIW) simulator developed by John B. Penson, Jr. and C. B. Baker at the University of Illinois. The AIW simulator can be used to forecast the sources and uses of funds in the farm sector and year-end demand for physical and financial assets and for loan funds outstanding. Today we will look at the products of the AIW

simulator rather than its construction or mechanics.

Outlook for 1974

With a second year of unparalleled prosperity still in their minds and in their savings, farmers will be entering the new year with more uncertainties than usual. Among these are (1) the availability and cost of fuels, fertilizers, and other farm inputs, (2) the acres to be planted, (3) the markets for their products, and (4) the costs and availability of loan funds. For farmers considering further purchases of real estate assets, a major uncertainty is whether land prices have risen beyond the level at which they can be paid for out of present and future earnings.

Our forecast of borrowing needs in 1974 is based on assumptions of an optimistic mood in the farm sector, that fuel requirements for production will be available, and that farmers will reinvest their net earnings and borrowed funds to further increase their productive capacity and farm earnings.

Interest Rates

Current interest rates on short- and intermediate-term loans are one to two percentage points above their 1972 average; farm mortgage rates are up about 1/2 percentage point (table 1). Interest rates on new short- and intermediate-term and farm mortgage loans in 1974 are expected to be higher than the 1973 average, and to be near fourth quarter 1973 levels. There is much uncertainty about the specific level

of interest rates we should expect for 1974, however, stemming from fluctuating monetary policy and economic developments. Because of these uncertainties, we have used two alternative interest rate "scenarios" in forecasting the level of capital formation and the demand for loan funds in 1974. A high interest rate scenario will assume an interest rate of 9 percent on short- and intermediate-term loans and 8 1/2 percent on farm mortgage loans in 1974. A moderating interest rate scenario, on the other hand, assumes an interest rate of 8 1/2 and 8 percent, respectively.

Capital formation

Figure 1 presents the level of investment in capital items. This capital formation is defined as the summation of new investment in real estate and nonreal estate assets, plus uses of funds to purchase real estate from farmers leaving the sector. Capital formation increased from \$6 billion in 1960 to about \$26 billion in 1973 when net farm income reached record levels. With net farm income expected to decline between \$3-5 billion in 1974 and if interest rates approximate the high interest rate scenario, the amount of current investment will approximately equal the 1973 level. If, instead, interest rates approximate the moderating interest rate scenario, capital formation is expected to reach \$27.2 billion or 5 percent greater than 1973.

Figure 2 shows how these investments have been financed over time--whether out of internal funds (farm and off-farm earnings) or by farm borrowings. Note that 1973 was rather unusual in two respects--the high level of annual investment and the high proportion financed out

of income. The exceptionally large use of internal funds in 1973 was the result of: (1) the high level of net farm income, and (2) increasing interest rates in the last half of the year which dampened the demand for loan funds. In 1974, however, the net flow of loan funds (new loans less repayments) is expected to account for a greater share of funds used to finance capital formation. Use of internal funds to finance capital formation in 1974, on the other hand, would fall to approximately 60 percent, a level recorded several times in the 1960's.

As shown in figure 2, the percentage of capital formation financed by internal and external sources of funds are closer to being equal than in recent years. The net flow of loan funds forecasted for 1974 and corresponding percentage of capital formation financed by this external source of funds is affected by the accuracy of the preliminary estimates for the stock of loan funds outstanding for the January 1, 1974, balance sheet. For example, an underestimation of the stock of loan funds outstanding on January 1, 1974, would understate the percentage of capital formation financed by the net flow of loan funds in 1973 and, therefore, overstate the percentage financed by the net flow of loan funds in 1974.

The stock of loan funds outstanding on January 1, 1974, presented in figures 2 and 4 attached were estimated by credit specialists using data available at this time. Alternatively, the AIW simulator was used to forecast these stocks. For example, the stock of farm mortgage loan funds outstanding was forecasted by the AIW simulator at \$38.6 billion for January 1, 1974, or some \$.6 billion higher than the preliminary estimate of \$38.0 billion. Similarly, the stock of short- and intermediate-

term loan funds outstanding on January 1, 1974, is forecasted by the AIW simulator to be \$42.04 billion, or \$.14 billion higher than the preliminary estimate of \$41.9 billion. Table 2 attached shows the impact that these alternative forecasts with the AIW simulator have upon the net flow of loan funds in 1973 and 1974 and corresponding percentages of capital formation financed by internal and external sources of funds. This alternative estimate of the stock of loan funds outstanding for January 1, 1974, provided by the AIW simulator results in an increase in the net flow of loan funds in 1973 of \$.7 billion and a corresponding \$.7 billion decline in the estimate of the net flow of loan funds in 1974. Importantly, however, the conclusions reached regarding the relative importance of external and internal sources of funds in financing capital formation in the farm sector are changed only slightly.

Farmland prices rose at a near record rate of 20 percent per acre in 1973 (see figure 3). Figure 3 shows a further, although less steep, rise forecasted for 1974. These rising land values will tend to increase the need for loan funds to purchase real estate from farmers leaving the sector.

Figure 4 shows total loan funds outstanding reaching as high as \$92 billion by January 1, 1975. Thus the net flow of loan funds in 1974 is expected to be roughly \$10-12 billion depending upon the interest rate scenario examined and the estimate of the stock of loan funds outstanding on January 1, 1974. Certainly, this forecast raises several questions. For example, will these amounts of loan funds be available without excessive strains on the lending institutions supplying them?

The ability of farm borrowers to service their debt commitments out of farm earnings is another major concern. Figure 5 presents the ratio of net farm income to total debt, an indicator of the ability of farmers to repay their loans out of farm earnings. This ratio in 1973 is expected to be higher than it was in recent years. For 1974, however, the ratio of net farm income to total loan funds outstanding is expected to be less favorable than 1973. While the ratio for 1973 is expected to be relatively higher than in recent years, one should keep in mind that repayments, particularly for farm mortgage loans, will be made for many years to come. Thus, the ratio of current net farm income to loan funds outstanding does not reflect the future debt servicing capacity of the farm sector. This is dramatized by the decline in the ratio in 1974.

Figure 5 shows the ratio of debt to asset values. This ratio is expected to decline almost 2 percentage points in 1973 but increase slightly in 1974.

Lending Activities

In the past, a large volume of farm loans were made by noninstitutional lenders such as merchants and dealers as well as individuals who finance their real estate sales. Typically, these sources have provided about two-fifths of the total loan funds used. In 1973, however, reports from finance and credit specialists indicate that these sources of loan funds probably provided a smaller proportion of total loan funds to the farm sector. Despite the very strong demands for farm machinery, fertilizer, and other purchased inputs, merchant and dealer credit appears to have dropped considerably. Sales did not need to be encouraged. Instead

of dealers making sales in which no payment on the purchase was required for several months as had been customary, purchasers were reported to be making downpayments on machinery and equipment orders that would not be filled for several months. This probably increased the demand for loan funds at banks, Production Credit Associations, and other institutional lenders.

With the spectacular increases in net farm income in recent years, farmers were able to finance a larger share of their current production expenses from internal sources of funds. Because of expectations for continued high income, many farmers may also find it relatively easier to qualify for short-term production loans.

On the farm mortgage lending side, there were numerous reports of the changed competitive position of Federal land banks with their increased legal maximum lending (debt to value) ratio and variable interest rate. Another important factor was the impact upon life insurance company lending of usuary laws on the rates they can charge. Available statistics bear out the increased competitiveness of Federal land banks. For example, new borrowing from Federal land banks was 70 percent higher in the first half of 1973 than one year earlier as compared with a 40-percent increase for life insurance companies. In 1974, these differences will probably be even greater. Financing by individual sellers under land contracts is also reported to have increased in 1973. The 20-percent rise in land values per acre may have heightened sellers' desire to use sales devices that minimize their capital gains taxes. Lender reactions to conditions in 1973 and prospects for 1974 will be considered in more detail by our panel.

TABLE 1.—AVERAGE INTEREST RATES ON FARM LOANS, SELECTED LENDERS

LOAN TYPE AND LENDER	1972	1973				1974 FORECAST	
	JULY 1	JAN. 1	APR. 1	JULY 1	OCT. 1	HIGH RATES	WEEKLY ADJUSTING RATES
	PER- CENT	PER- CENT	PER- CENT	PER- CENT	PER- CENT	PER- CENT	PER- CENT
SHORT- AND INTERMEDIATE-TERM FUNDS: ..							
COMMERCIAL BANKS ¹							
FEEDER CATTLE LOANS	7.34	7.74	8.08	8.01	8.71		
OTHER PRODUCTION LOANS	7.55	7.59	8.01	8.05	8.49		
PRODUCTION CREDIT ASSOCIATIONS	7.57	7.48	7.71	8.10	8.58		
FARM MORTGAGE:							
FEDERAL LAND BANKS	7.42	7.28	7.58	7.55	7.75	8.50	8.00
LIFE INSURANCE COMPANIES ¹	8.32	8.20	8.50	8.40	8.70		

¹ BANKS REPORTING FOR 0.10 RELEASE OF THE FEDERAL RESERVE SYSTEM. ² AVERAGE FOR THE QUARTER ENDING DAY BEFORE DATE SHOWN.

Table 2--Percentage of Capital Formation Financed by External and Internal Sources of Funds in the Farm Sector,
Under Alternative Interest Rate Scenarios.

Item	1973		1974	
	: High Interest : : Rates :		: Moderating Interest : : Rates :	
Sources of funds used to finance capital formation:	a/	b/	a/	b/
Cash flow of income.....	18.2	17.5	15.1	15.8
New loans less repayments:				
Farm mortgage loan funds.....	3.5	4.1	6.1	5.5
Short-and intermediate term loan funds.....	4.1	4.2	4.4	4.3
Total cash sources of funds used.....	25.8	25.8	25.6	25.6
Percentage of capital formation financed by:				
Cash flow of income.....	70.5	67.8	59.0	61.7
New loans less repayments:				
Farm mortgage loan funds.....	13.6	15.9	23.8	21.5
Short-and intermediate term loan funds.....	15.9	16.3	17.2	16.8
Total cash sources of funds used.....	100.0	100.0	100.0	100.0

a/ Preliminary estimates for the Balance Sheet for the Farming Sector for 1974.

b/ Forecast by the AIW Simulator.

Conclusions

With relatively optimistic expectations about farm product prices and incomes, farmers are expected to invest heavily in equipment, farmland, and other productive inputs in 1974. The value of farmland can be expected to climb further in 1974 though less than the 20-percent increase this year. With net incomes expected to be second only to 1973, demand for loan funds will remain strong. Although some shifts among lenders are expected, credit supplies are anticipated to be adequate. Interest rates on new farm loans averaged higher in 1973 than in the year before and are expected to average near fourth quarter 1973 levels.

Tables and Figures

Table 1---Average interest rates on new farm loans, selected lenders.

Table 2---Percentage of capital formation financed by external and internal sources of funds in the farm sector under alternative interest rate scenarios.

Figure 1--Annual farm capital formation.

Figure 2--Cash sources of funds used to finance annual capital formation.

Figure 3--Trends in U.S. farm real estate values per acre.

Figure 4--Farm loan funds outstanding January 1.

Figure 5--Rates of income to debt, and debt to assets, farm sector.

FIGURE 1--ANNUAL FARM CAPITAL FORMATION

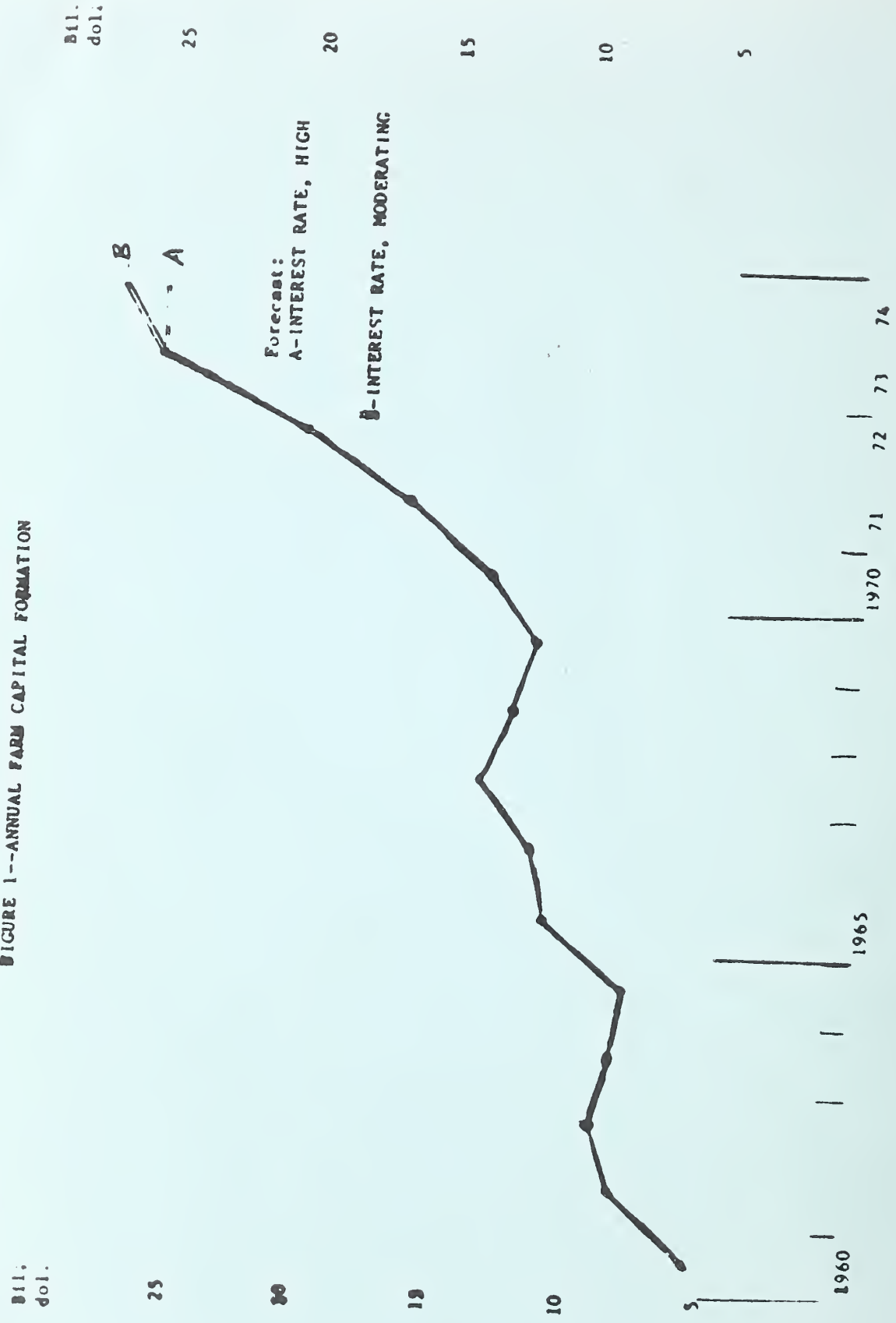


FIGURE 2--C/SR SOURCES OF FUNDS USED TO FINANCE ANNUAL CAPITAL FORMATION

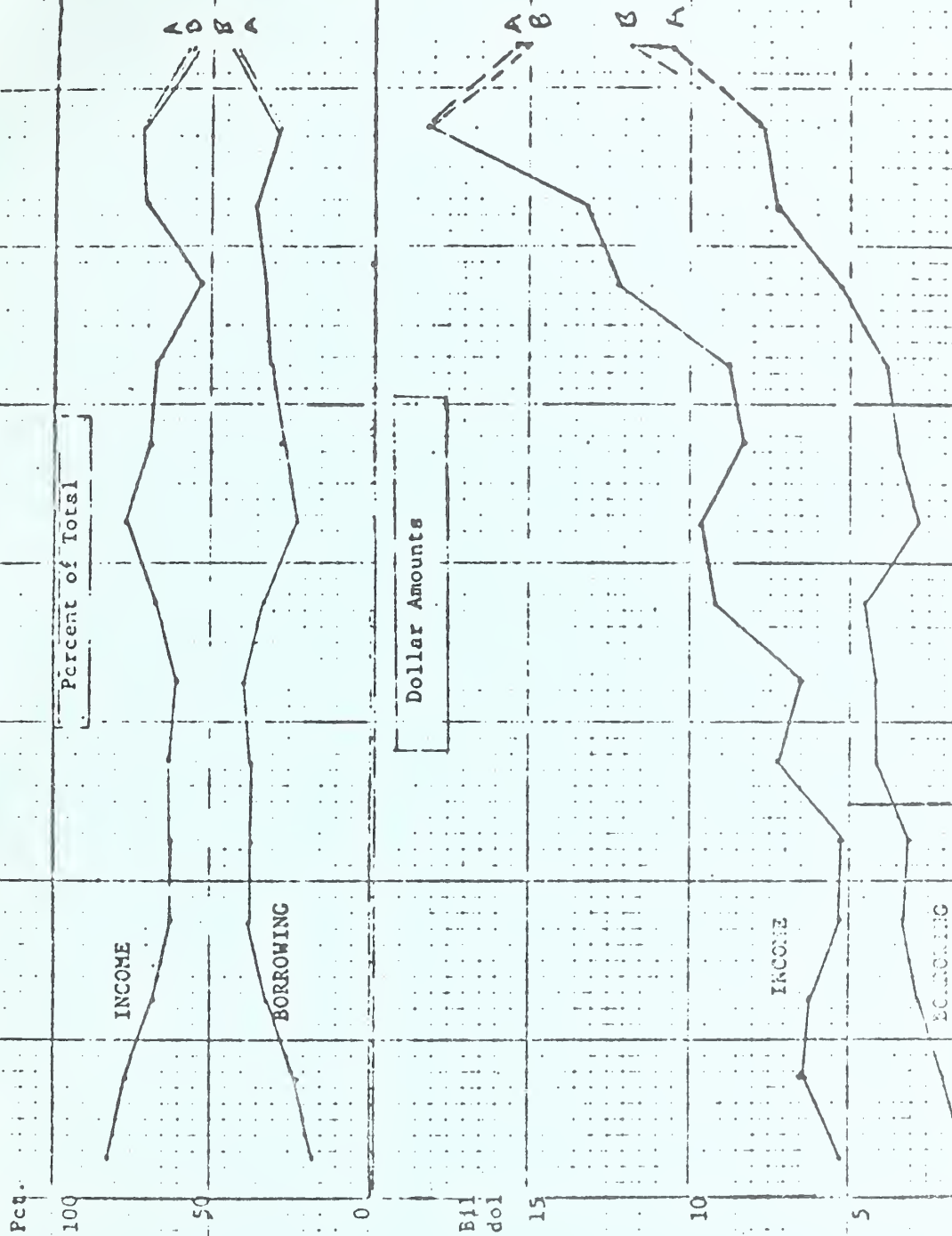
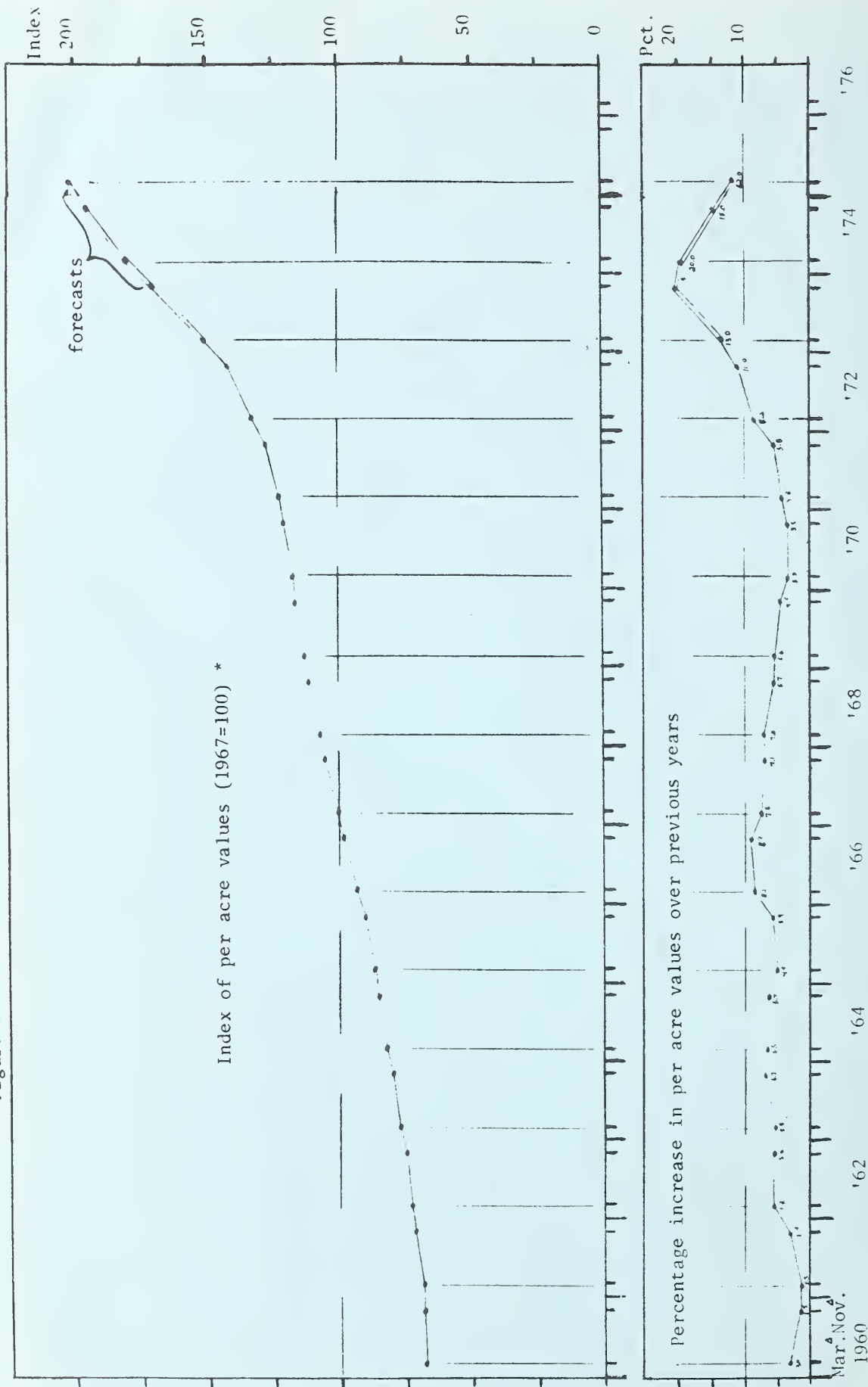


Figure 3--Trends in U.S. farm real estate values per acre

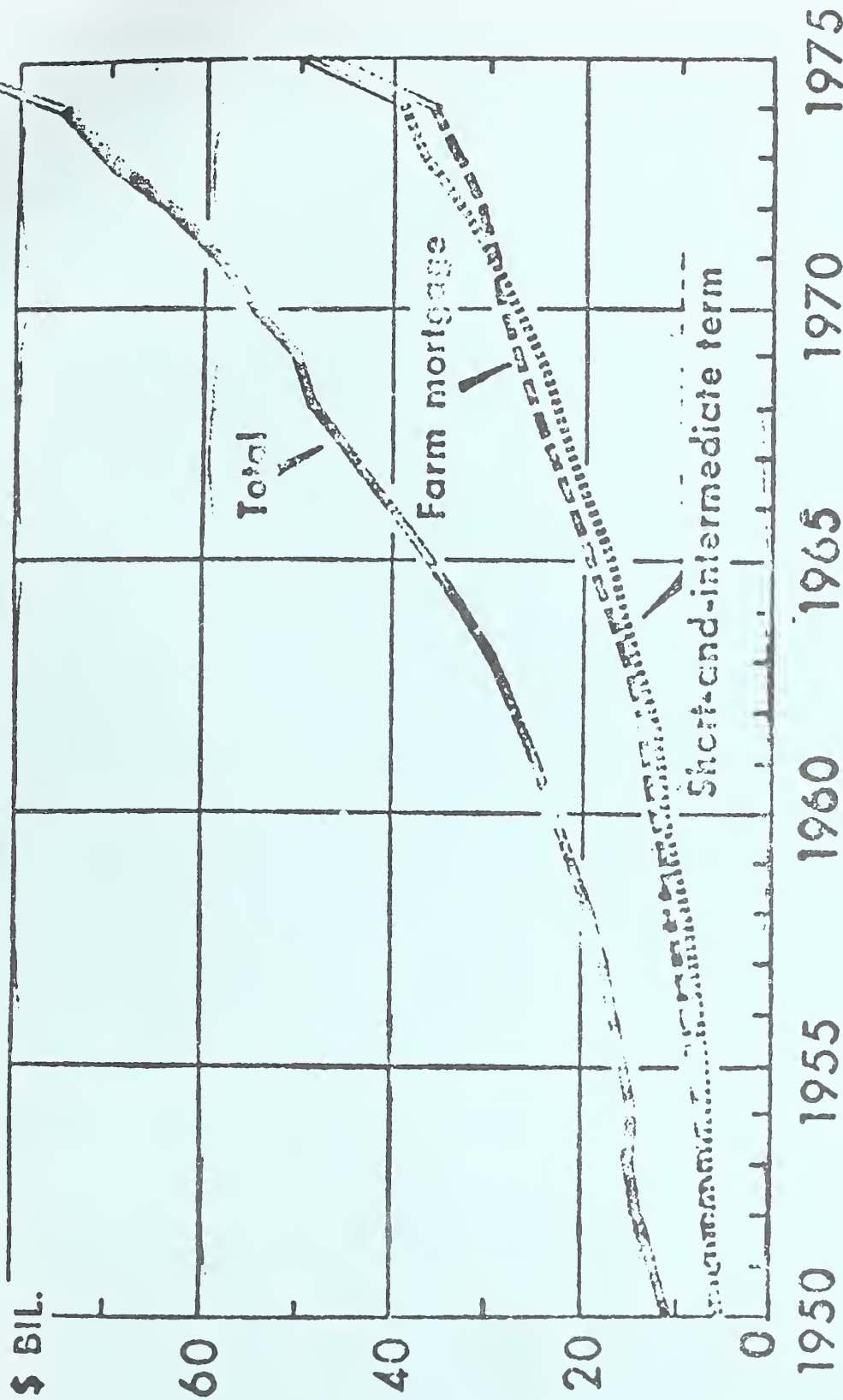


* Excludes Alaska and Hawaii.

Δ Index values are as of March 1 and Nov. 1.

Sources: "Farm Real Estate Market Developments," Suppl. No. 2, CD-77, ERS, USDA, June 1973, and CD-78, ERS, USDA, July 1973.

FARM LOAN FUNDS OUTSTANDING JANUARY



48 STATES. EXCLUDES CCC LOANS.

1974 PRELIMINARY.

DATA AS OF JAN. 1.

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FIGURE 4

